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[p.3]

Chapter I

FROM HUNTING AND GATHERING TO AGRICULTURE

Hunting and Gathering

101 In Southeastern Asia today there are peoples of different cultural levels
●174 carrying on some of the major economies that man has developed in the
222 course of time. The first people to invade the tropical forest regions around
105 the South China Sea were alithic, or prepalaeolithic, food gatherers,[1] who obtained their food by collecting edible wild plants and by hunting and fishing. Today geographically separated peoples are still living in a prepalaeolithic or palaeolithic food-gathering and hunting stage.[2] In Southeastern Asia they are represented by the Semang of the Malay Peninsula, the Andaman Islanders, and the Aeta of the Philippines—all of whom are Negritos, or dwarfed Negroids—the Kubu of Sumatra, the Sakai of the Malay Peninsula, the Toala of Celebes,[3] and the Punan of Borneo.[4]

222 The degree to which collecting, hunting, or fishing contributes to the
462 food supply varies with the season; it also varies with different peoples,
105 depending upon the resources of the region, the type of equipment the people may possess, and the skills they may have acquired. Food-gathering and hunting peoples have a division of labor under which the men hunt while the women and children gather vegetable matter and catch insects and small animals. The men may lend a helping hand, however, in digging up some of the very deep-growing yams. Men will also participate in the
621 picking of fruits, especially when it is necessary to climb tall trees. The food gatherers and hunters of Southeastern Asia are nomadic in the sense that they do not remain long in one place. However, they do not wander aimlessly through the jungle. Each group has its definite territory—among

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Note: The titles of the works here cited in footnotes have been abbreviated, whenever possible. The full titles may be found in the Bibliography, p. 269 ff.

1 Nippold (Rassen- und Kulturgeschichte der Negrito-Völker, 1936, pp. 253–255 and 398–400) considers the alithic wood culture of the Negritos of Southeastern Asia to be older than palaeolithic culture. These people use wood rather than stone as raw material for their tools. Because of the perishable nature of wood, archaeologists and prehistorians have not yet been able, so far as I know, to go farther back than the palaeolithic age and therefore have not been able to confirm the hypothesis of an alithic age. Menghin (Weltgeschichte der Steinzeit, 1931, p. 91) believes that, from an archaeological point of view, an alithic wood culture may be regarded only as a possibility, but Kern (Die Anfänge der Weltgeschichte, 1933, p. 35), who compared pygmy culture with palaeolithic cultures, comes to the conclusion that alithic wood cultures probably preceded palaeolithic culture.

2 By divesting the word "palaeolithic" of its specific chronological connotation the term may be used for present-day peoples who have a food-gathering and hunting culture.

3 The racial affinities of the Kubu, the Sakai, and the Toala are not clear; by some they are called Veddoids, by others, Australoids.

4 They are considered to be Proto-Malays.

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ing, cultivation. In contrast to this method, advanced agriculture is practiced year after year on the same well tended plot, the fertility of which is maintained by manuring, crop rotation, intensive cultivation, terracing, and often the regular addition of mineral matter in the form of silt deposited on the land by irrigation water. Only occasionally may the land be allowed a short fallow period. This type of tillage may be called permament-field, or sedentary, cultivation.[10]

Shifting cultivation and sedentary cultivation are generic terms used to describe fundamental differences in land use, differences that find their outward expression in the cultural landscape created by those who maintain these economies.[11] Can there be a greater contrast than that between the shifting cultivators' small, irregular, temporary clearings with their chaotic jumble of fallen and half-fallen tree trunks and stumps, on the one hand, and, on the other, an irrigated plain, subdivided into small fields, each surrounded by a dyke—or a steep slope where a succession of beautifully built terraces leads up for several hundreds or even thousands of feet? These kinds of landscape are physical expressions of totally different economies, or modes of life, with different cultural patterns, concepts of land tenure, attitudes toward the soil, and material equipment.

Historically, shifting cultivation without doubt antedates sedentary cultivation, which requires among other things more elaborate techniques and deeper insight into the relationships between soil, tillage, and yields.

Shifting and sedentary cultivation may each be further classified in terms of tools, as we have seen, or in terms of crops, systems of rotation, and the like.[12] For instance, in terms of crops, we may distinguish between grain and grainless culture. Of the two, grainless culture is generally conceded to be the older. One argument for this thesis is that fruits and many of the root and leaf crops may be eaten raw or simply prepared, whereas cereals require more elaborate preparation. The fact that grainless agriculture is largely confined to the fringes of Southeastern Asia also supports the thesis that, at least in this region, grainless agriculture preceded the cultivation of cereals. Still further substantiation is found in Polynesia, where the inhabitants cultivated no cereals when they were first visited

[10] Although sedentary cultivation is commonly practiced by people who use plows drawn by animals, there are large areas where it is practiced with little or no use of the plow. Such areas are found in parts of the Philippines, Java, Sumatra, and southern China, where steep hillsides have been terraced and where the nature of the terrain makes the use of work animals impossible. Sometimes individual farms or patches of land are so small that they must be tilled with hoes, even though plows may be used on adjacent farms. In places custom and religious tradition forbid the use of plows and draft animals.

[11] Waibel: Probleme der Landwirtschaftsgeographie, 1933, p. 11.

[12] For example, we may distinguish: (a) shifting dibble cultivation, shifting hoe cultivation, and shifting plow cultivation; (b) grainless shifting cultivation and shifting grain cultivation; (c) shifting field-forest cultivation and shifting field-grass cultivation; (d) permanent plow cultivation and permanent planting-stick cultivation; (e) permanent four-field cultivation, and so on. Not all of these are found in Southeastern Asia.

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by Westerners. This may be explained by the assumption that the ancestors of the Polynesians migrated from Southeastern Asia to the islands of the Pacific before cereals had replaced root crops as dominant plants.[13]

In Southeastern Asia we find both shifting and sedentary cultivators who depend exclusively upon root crops as a source of starch. The Nias, Mentawei, and Engano islanders off the western coast of Sumatra grew no grains until recently. Beside such root crops as taro (*Colocasia esculenta* Schott), yams (*Dioscorea* sp.), and *bira* (*Alocasia macrorhiza* (L.) Schott), they cultivated such other foods as bananas (*Musa sapientum* L.), sugar cane (*Saccharum officinarum* L.), and coconuts (*Cocos nucifera* L.). In the eastern parts of the Malay Archipelago and New Guinea the inhabitants depend chiefly on the starch of the sago palm (*Metroxylon sagu* Rottb.) which they either plant or collect in the wild state. Here, again, taro, yams, and bira are other sources of starch, as are such imported American plants as cassava (*Manihot utilissima* Pohl) and sweet potatoes (*Ipomoea batatas* Poir.). The folklore and religious practices of many tribes in Borneo and Celebes who today grow cereals recall the time when these tribes had only root crops.

In many parts of the Pacific taro is grown by sedentary cultivators on terraced, flooded fields.[14] We do not know whether the techniques of terracing and irrigation developed independently in Oceania and on the mainland, or whether the ancestors of the Polynesians brought their techniques with them from Southeastern Asia. If the latter be true, they must have left before the cultivation of rice was known to them; otherwise rice would have been among their crops. That it was not among them suggests that

[13] Forde: Habitat, Economy and Society, 1934, pp. 428–430. In remote centuries the Polynesians lived in the Malay Archipelago, where they cultivated such root crops as taro, yams, "arrowroot" (*Canna orientalis* Rosc.), and turmeric (*Curcuma* sp.), in addition to bananas and plantains (*Musa paradisiaca* L.), breadfruit (*Artocarpus communis* Forst.) and coconuts, all of which, according to the botanists, are natives of the forest regions of Southeastern Asia, whether the mainland or the Malayan Archipelago. All these plants were probably carried to Polynesia, either via a northern route through Micronesia or by a more southerly course through New Guinea and Melanesia. See Buck: Vikings of the Sunrise, 1938, pp. 305–309. The names of these plants were also carried into the islands of the Pacific. Variants of the names "taro" and "bira," to mention two examples, range from the Malay Archipelago far into Oceania. *Colocasia* is *talo* in Nias, *tales* in Sundanese, *tales* in Javanese, *dalo* in Fiji, *talo* in Samoan, *kalo* in Hawaiian, *taro* in Maori. *Alocasia* is known as *birah* or *bira* in Batak, *bira* in Madurese, *biga* in the Philippines, *piga* in Guam, and *via* in Fiji. Later, the Polynesians, following the example of other peoples of the Pacific, were quick to adopt such New World crops as cassava and sweet potatoes as well as American fruit trees into their economy because these are closely related to their customary crops, but they still remain most reluctant to change from roots to grains as staple, possibly because "the cultivation of roots and fruit trees has little technical relation to the raising of grains, for they are not grown from seed but from eyes and cuttings." See Forde: *op. cit.*, p. 380. Another illustration of the fact that a plant, the introduction of which involves a change in methods of cultivation, is accepted only under pressure, is found in the history of the introduction of the potato into Europe.

[14] Krämer: "Der Taro und die Nasskultur," 1928, pp. 165–172; Rivers: "Irrigation and the Cultivation of Taro," 1926, pp. 262–287.

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When fires no longer ravage the grasslands, however, trees return and finally drive out the grasses completely, for the latter cannot stand shade.[9]

The spread of grass is especially rapid in regions with a long, pronounced dry season, whereas reforestation is more likely to take place in areas with a well distributed, high annual rainfall. This may explain why the Philippines and Indochina have a larger percentage of open grasslands than do Malaya and the Netherlands Indies.

A relatively high density of population is an important factor in preventing successful reforestation and encouraging grasses. In a thinly settled forest area there is sufficient land to allow for a long rest period, but an increasing density of population results in the shortening of the fallow period to such a degree that the soil is given insufficient time to recover its fertility. The shorter the fallow period the poorer the succeeding forest —if any—and the poorer the following crop yields, until finally the land can no longer satisfy the needs of the shifting cultivator.

Pendleton believes that this cycle may have contributed materially to the downfall of the Khmers in Cambodia (Cambodge). He states that although the Khmers used the plow on very limited areas of wet riceland, they had largely to depend on the planting stick and shifting cultivation for their food supply. As the demands for more food arose from the rapidly increasing population concentrated in the city of Angkor, the fallow period granted to the uplands had to be progressively shortened. At the same time fires became so frequent that culturally induced grasslands spread while the cultivable area decreased, thus further diminishing the food supply available to the people of Angkor. "While the actual fall of Angkor is ascribed to the superior military power of invaders, the resistance of the inhabitants was doubtless much less than it would have been had the lands been productive and they had had adequate supplies of food."[10]

Declining crop yields and the spread of grasses have been advanced as important reasons for the breakdown of the Mayan civilization,[11] and Pendleton further raises the question "whether the development of cogonals might not have been an important contributing factor in the dying out of some of the other civilizations of the tropics, notably that of Anuradapura, in Ceylon."[12]

Today the ruins of the Mayan cities, as well as those of Angkor, are surrounded by relatively luxuriant forest vegetation, which has had time to displace the pernicious grasses since man and his tool, fire, have abandoned the inhospitable grasslands.

Not only does shifting cultivation alter the character of the vegetation,

[9] When an old ladang remains unburned for several years the following trees spring up in addition to those already mentioned in footnote 5: *Erechthites hieracifolia* Rafin., *Blumea balsamifera* DC., *Peltophorum dasyrachis* Kurz, *Macaranga tanarius* Muell. Arg., and *Piper aduncum* L.

[10] Pendleton: *op. cit.*, pp. 46 and 47.

[11] Cook: "Milpa Agriculture," 1921, pp. 307–326.

[12] Pendleton: *op. cit.*, p. 47.

Chapter Twenty-five

PEOPLES, POLITICS AND PROSPECTS IN SOUTHEAST ASIA

101 THE setting of Southeast Asia may be summed up as one of
184 extremes of relief (deltaic plains and mountains) and climate
311 mostly approaching the wet limit for plant life but merging into
105 monsoonal types. To this setting the people have made varying responses, ranging from migrant food gatherers and hunters in the jungles, to subsistence farmers in the plains, but all turning upon woody materials for weapons, implements, house-structures and domestic utensils, upon rice, the cereal of the wet extreme, and upon social systems of communal help. The whole social and economic life has been galvanised over the past century or two by being more and more drawn into commercial and industrial activities developed in response to and on the basis of external needs for the minerals and agricultural products of Southeast Asia, whereas prior to that time the region was touched only by a trickle of traders moving between India and China.

FACTORS IN THE HISTORICAL GEOGRAPHY

174 Several factors account for the difficulty of obtaining firm data
177 to fill in our general picture of the historical geography of South-
311 east Asia. In the first place, there grew up no strong literary tradi-
175 tion to last through the centuries and record the past in a form other than mythical. Here tradition is largely oral and literature essentially Indian rather than indigenous. And whatever there was of local record and history has rotted away quickly, the climate, the ants, insects and moulds soon destroying anything on wood, paper, leather or cloth. Moreover, in this setting of swamps and forest, the most easily available material is wood, and artistic tradition expressed in wood, whether in carvings, buildings or tools, rapidly disintegrates, leaving little of that sort of evidence which is the basis of our facts about early periods in other regions. Buildings and carvings on stone were not normal expressions of Southeast Asia people where over large areas stone is not easily come by and where

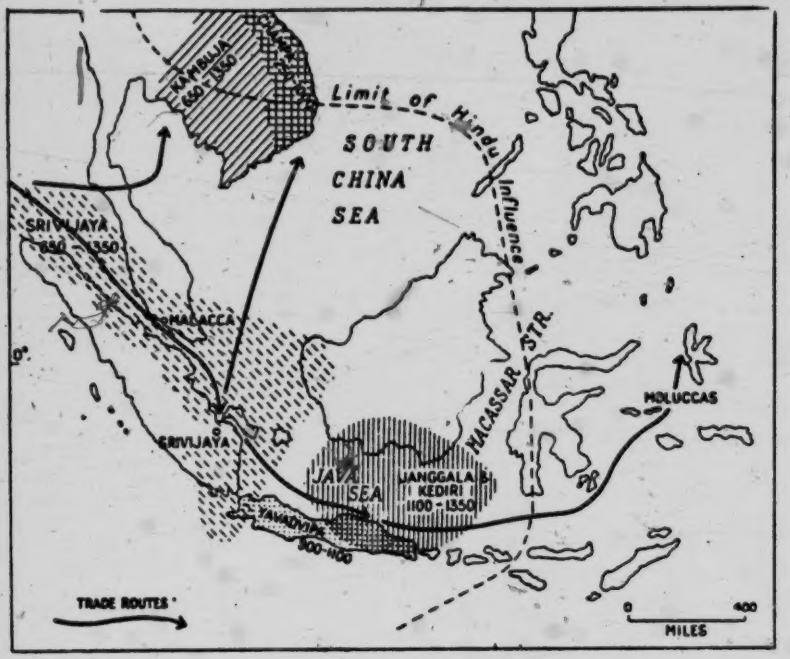

FIG. 113.—Historic Pattern of Southeast Asia during Indian Colonial Period

implements had not in any case developed far enough to deal with stone. Hence monumental evidence in Southeast Asia is so largely Indian, an introduction by foreigners using styles and techniques developed in their home settings, and most developed in the drier parts of this region, where stone is more accessible. On the clay lands, historic brick structures, also an Indian innovation, weather to nothing very quickly. At Angkor may be seen the power of quick-growing tropical trees to shatter and break down temples and palaces built of stone and lateritic blocks.

This, too, is a region of natural calamities, difficult though it is to pin-point them. Little kingdoms have been wiped out in a few hours by Javanese volcanoes, as in A.D. 1006 when the flourishing city of Dharmavamsa (a great king of Central Java) was reduced to ashes by "a great calamity," probably an explosion and lava outflow of the Merapi volcano. Settlements along rivers have been obliterated when huge mud-flows swept down from loose ashes on the flanks of new eruptions, possibly accounting for our ignorance of east Sumatran kingdoms. Coasts have altered through the years

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Further to complicate the historic geography was the fact that the literary people, the monks and religious men, were Indian or Indian-minded for long periods, disinterested in mundane records, and following the custom, still evident among many Southeast Asia people today, of avoiding personal names, so that anonymity, obscurity and confused nomenclature veil the past even in such records as do exist. Many experiments in writing styles were developed among these isolated and complex peoples and often inscriptions made in them cannot be translated today. Because of the dispersal tendencies within the territories themselves and the lack of focus to the region as a whole, no great depositories of learning were established in Southeast Asia to gather and conserve the record of its past.

Population Changes

Broadly speaking, the region has been until recently one of very thin population and large patches of it still contain populations of remarkably low density. Direct evidence of densities are scanty for periods farther back than this century, yet it seems probable that the whole of Southeast Asia in 1800 contained only about ten million people, when the region was probably as thinly peopled in its most attractive areas as Upper Burma and Upper Siam, the least attractive and developed areas, are today; Malaya then contained about a quarter million people, Java about four million, Burma probably less than two million. It was, even at the end of the 18th century, a zone of labour shortage and the objective of the local princelings of the times was to get hands, the basic power resource of their time, the one way of securing a small surplus from their fundamentally subsistent territories. Outsiders were not greatly attracted to Southeast Asia itself, as apart from the routes through it. To Spain its old colony, the Philippines, was no great asset and more related to Mexico than to Spain, remote and ready to drop from the Spanish orbit during the 19th century. To Holland, its colony in Java was a company venture that yielded little direct profit for many years and was at times on the verge of bankruptcy.

But the last 150 years brought tremendous changes in population. First, on the heels of the Industrial Revolution in Europe, came a revival and an expanded volume of trade between the Indian Ocean and the Far East, a stream which threaded the seaways of